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# **INDONESIA'S TRADE PERFORMANCE DURING THE ECONOMIC CRISIS**

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**November 9, 1999**

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<sup>1</sup> PEG is a USAID-funded Project. The views expressed in this report are those of the author and not necessarily those of USAID, the U.S. Government or the Government of Indonesia.

## Indonesia's Trade Performance During the Economic Crisis

### Executive Summary

**Overview of the Trade Situation.** Many believe that the trade sector will lead in Indonesia's economic recovery. Yet, the crisis is now more than two years old and Indonesia's export performance has been a disappointment. Even more worrisome is the collapse of exports that began during the fall buying season in the latter half of 1998 and continued into early 1999 (Chart 1a). In 1998, exports of natural resource-based products were the main problem. In 1999, the problem was in manufacturing exports, which slumped 17.2% during the first six months of the year (Table 1).

The situation with Indonesian imports is even worse than with exports. Imports are a lead indicator of exports since most of Indonesia's imports are raw materials used by industry. Imports were about 60 percent of pre-crisis levels throughout 1998 and were even lower during the first half of 1999 (Charts 1b and 2).

**Declining International Prices and Indonesian Exports.** Indonesia's export performance appears much better when viewed in real terms after discounting for price changes. Lower prices account for all of the decline in natural-resource-based exports; and in 1999, the decline in manufacturing prices (-17.9%) was almost identical to the decline in manufacturing exports. Real exports did decline precipitously during the latter half of 1998 and early 1999, but they have since recovered and are now well above pre-crisis levels (Chart 3). *This implies that the export sector continues to generate real gains, including employment gains, for the economy.*

**Recent Exchange Rate Movements and Exports.** One factor which may have contributed to the drop in exports is the appreciation of the exchange rate. The rupiah began to climb in July of 1998 and reached 6700 to the U.S. dollar in June of 1999. At the same time, the competitive benefits of Indonesia's early depreciation were eroded by inflation. In real terms, the net depreciation of the rupiah since the beginning of the crisis is about 40% (Chart 4). *Although this is still substantial, some exporters claim that it is more profitable to sell on the domestic market than on the export market.*

**Problems with Trade Finance.** The shortage of trade finance is often mentioned as the most serious problem facing exporters. Yet, export industries that rely heavily on imported raw materials seem to be performing better than industries with low import dependence (Table 2). This is because industries with high imported input content may have higher foreign ownership shares or connections with foreign buyers that make it easier for them to obtain finance. *The shortage of trade finance is a liquidity problem that affects all exporters, not just those that rely heavily on imported raw materials.*

A large number of programs have been introduced during the past two years to facilitate the flow of trade finance. The programs depend on a functioning banking system that can issue letters of credit and take on some risk of default by Indonesian borrowers. With the breakdown of the banking sector, none of the programs has been widely used. *Until international banks resume lending in Indonesia and until capital adequacy ratios improve so that domestic banks can also lend, it is unlikely that the programs will much impact on exports.*

**Indonesia Export Performance by Size of Company.** It appears that export sectors with smaller exporters have done better than those dominated by a few firms (Table 3). One reason for this is that small companies rely less on outside financing and are unlikely to have accumulated foreign currency debt before the crisis.

# Indonesia's Trade Performance During the Economic Crisis

## *An Overview of the Trade Situation*

Large currency depreciations such as that experienced by Indonesia during the economic crisis should give a big boost to exports within one to two years after the depreciation. Yet, it is now more than two years since the crisis began and Indonesia's export performance has been anemic. Furthermore, exports collapsed at the start of the fall buying season in the second half of 1998 and have shown no sign of recovery in 1999 (Chart 1a).

The situation with Indonesian imports is even worse than with exports. Imports began to decline immediately when the crisis began, and were about 60 percent of pre-crisis levels throughout 1998 (Chart 1b). About two-thirds of Indonesia imports are spare parts and industrial raw materials that are used for processing by Indonesian industries (Charts 2a and 2b). Because of the lead time between the date raw materials are imported and the date finished goods are exported, imports serve as an indicator of future exports. As of yet, however, there is no sign of a recovery in imports. Rather, imports for the first six months of 1999 were even lower than in 1998.

## *Indonesia's Export Performance in 1998 and 1999*

During the crisis, Indonesian non-oil and gas exports fell for the first time since the 1980's. In 1998, the problem was in exports of natural resource-based products (mining, minerals, agriculture, and forestry), which fell **10-11%** and caused overall exports to decline **2.4%** (Table 1). Manufacturing exports increased slightly by **5.9%**. In 1999, the problem was in manufacturing exports, which slumped **17.2%** and caused overall exports to decline by **12.4%**.

**Table 1: Summary of Indonesia's Export Performance During the Economic Crisis**

	Exports		Export Situation 1998 Versus 1997		Export Situation First 6 Months of 1999 Vs. First 6 months of 1998	
	1997 (Million US\$)	1998	Export Growth	Change in Export Prices	Export Growth	Change in Export Prices
<b>Total Non Oil/Gas</b>	<b>41.6</b>	<b>40.8</b>	<b>-2.4%</b>	<b>-13.6%</b>	<b>-12.4%</b>	<b>-13.1%</b>
<b>Minerals and Mining</b>	<b>3.9</b>	<b>3.5</b>	<b>-10.9%</b>	<b>-20.5%</b>	<b>1.5%</b>	<b>-12.1%</b>
<b>Agriculture</b>	<b>8.1</b>	<b>7.3</b>	<b>-10.1%</b>	<b>-11.8%</b>	<b>-6.8%</b>	<b>-14.1%</b>
<b>Forestry</b>	<b>6.8</b>	<b>6.1</b>	<b>-9.7%</b>	<b>-30.0%</b>	<b>-3.3%</b>	<b>0.5%</b>
<b>Other Manufacturers (Non-Resource Intensive)</b>	<b>22.0</b>	<b>23.3</b>	<b>5.9%</b>	<b>-8.6%</b>	<b>-17.2%</b>	<b>-17.9%</b>
<b>Other</b>	<b>0.8</b>	<b>0.5</b>	<b>-36.1%</b>	<b>N.A.</b>	<b>-48.7%</b>	<b>NA</b>

## *Declining International Prices and Indonesian Exports*

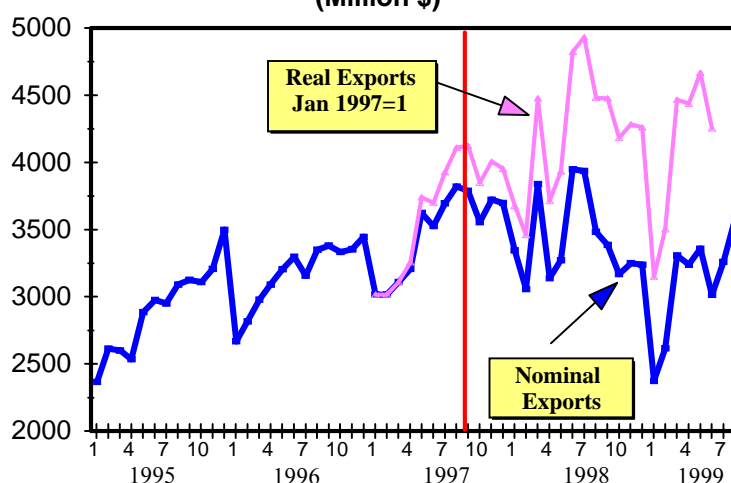
There has been abundant anecdotal information on why Indonesia exports have been performing so poorly. Among the problems mentioned in the press are shortages of containers, supply disruptions, and the lack of trade finance. *But probably the single most important factor causing Indonesia's weak export performance has been declining international prices.* International commodity prices have been depressed for several years and have declined even further as a result of the regional slowdown in Asia. Declining prices account for all of the negative growth of Indonesia's natural-resource-based exports during the past two years.

More surprising is the decline in manufacturing prices. Prices for manufacturing goods are generally sticky in the

downward direction, but it appears that Indonesian exporters have had to offer substantial discounts in order to maintain sales. For 1999, the decline in manufacturing prices (-17.9%) was almost identical to the decline in manufacturing exports.

In Chart 3, Indonesia's nominal exports are deflated by an export price index (Jan 1997=1) to obtain a measure of real exports (the volume of exports). After deflating by prices, Indonesian exports appear to have been increasing at a healthy pace through mid-1998 when they went into decline for about six months. In March of 1999, however, real exports recovered and are now well above pre-crisis levels. *This implies that even though Indonesia is losing foreign exchange earnings from lower prices, the export sector does continue to generate real gains, including employment gains, for the economy.*

**CHART 3: REAL NON-OIL EXPORTS**  
(Million \$)



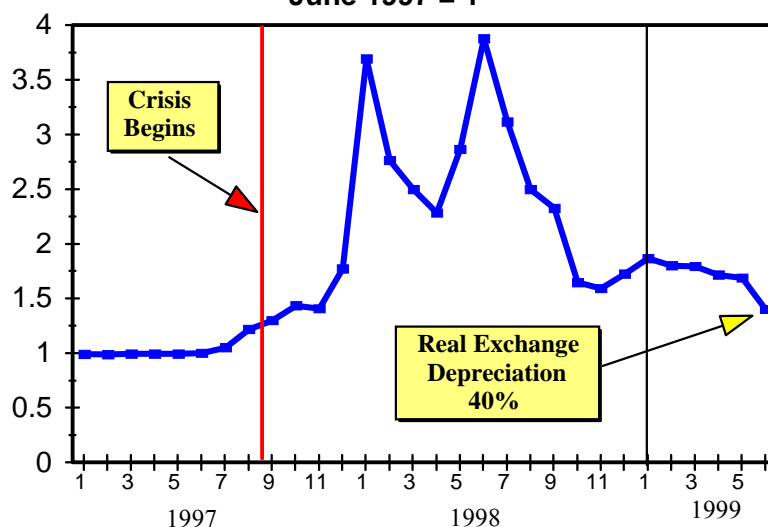
There are several reasons for the decline in U.S. dollar prices for manufacturing goods. First and foremost, domestic demand was severely depressed by the tight monetary conditions early in the crisis and as a result, some exporters shifted sales from the domestic to international markets. In order to expand overseas sales, they probably had to offer lower prices. Second, Indonesian exporters sell primarily on an fob basis and few market their products directly abroad. Since depreciation of the rupiah has led to increased returns on a domestic currency basis, international buyers have probably been able to garner part of those increases for themselves by requiring price discounts. Such price discounts may also be required to offset the increased risk of doing business in Indonesia, since buyers are reportedly concerned that orders from Indonesia will not be met because of political instability.<sup>1</sup>

Cautionary Note: The export price index used for this analysis is the standard type of index reported by many countries in the IMF Financial Statistics. Such an index is not reported by Indonesia and was specifically constructed for this report. During the construction of the index, we found many problems with the underlying data and feel the index is very unreliable as an exact measure of price changes. But it probably does serve as a good indicator of the general trend in export prices.

<sup>1</sup> In spite of depressed Asian markets, the international shipping cartel for the Pacific region raised US dollar prices substantially several months after the currency depreciations in Asia. There is also an imbalance between in-coming and out-going containers which caused container prices to go way up. As a result, Indonesian exporters have probably had to discount prices in order to offset higher shipping costs.

**CHART 4: REAL EXCHANGE RATE**

June 1997 = 1



#### ***Recent Exchange Rate Movements and Exports***

One factor that may have contributed to the drop in exports late last year is the appreciation of the exchange rate. The rupiah began to appreciate in July of 1998 and reached 6700 rupiah to the U.S. dollar in June of 1999. This was the very period during which Indonesian exports began to decline. At the same time, the competitive benefits of Indonesia's depreciation have been gradually eroded by inflation, which was about 100 percent between June 1997 and June 1999. In real terms, therefore, the net depreciation of the rupiah since the beginning of the crisis has been about 40 percent (Chart 4).

Although the real depreciation of the rupiah during the crisis is still substantial, some exporters claim that with the upturn in domestic demand and appreciation of the rupiah, it has become more profitable to sell on the domestic market than on the export market.<sup>2</sup>

#### ***Problems with Trade Finance***

The shortage of trade finance is often mentioned as the single most important problem facing Indonesian exporters. This problem continues today in spite of the large number of bilateral and Indonesian Government programs that have been introduced to solve the problem.

If trade finance is a problem, those export industries that rely heavily on imported raw materials should be doing poorly. In fact, these industries seem to be performing better than industries with low import dependence (Table 2). In 1998, exports of high import-content manufacturing industries increased by 6.5%, compared with minus 0.9% for low import-content industries. In 1999, both types of industries experienced negative growth, but the decline for high import-content industries (-3.2%) was much less than for low import-content industries (-11.3%).

<sup>2</sup> Many now believe that the exchange rate was overvalued by as much as 10 to 20 percent before the crisis, leading to a loss in Indonesia's competitiveness. Non-branded, labor intensive products with low margins were the most severely affected. If this is the case, further appreciation of the rupiah below 5500-to-6000 rupiah per U.S. dollar could cause major problems for exporters.

**Table 2: Indonesia's Export Performance by Imported Input Content**

	Export Growth For Industries with Imported Input Content	
	>37 Percent	<37 Percent
1998 on 1997	6.5%	-0.9%
First 6 mos. of 1999 on First 6 Mos. of 1998	-3.2%	-11.3%

Note: Table 2 includes forestry and manufacturing. Mining and agriculture are excluded.

The dichotomy between popular views on the trade finance problem and what the data seem to show can be explained in several ways. First, those exporters who wish to stay in business must find a way around the problem. Interviews with Indonesian exporters indicate that many are financing their activities from internal capital (some by not paying back bank loans) or have arranged alternative forms of financing through their buyers. Also, industries with high imported input content may have higher foreign ownership shares or licensing arrangements that allow them to obtain financing through their foreign partners.

***Second, the shortage of trade finance is a general liquidity problem that affects all exporters, not just those that rely heavily on imported raw materials.*** Exporters are in need of finance for their entire operations -- raw material purchases whether foreign or domestic, working capital for manufacturing and for marketing, and post-shipment finance, including finance for overseas buyers. Viewed this way, the shortage of finance is a problem, but it affects all exporters. As noted earlier, those that rely heavily on raw material imports may have an easier time finding ways around the problem.

The breakdown of the banking sector is at the heart of the trade finance problem in Indonesia. Although a number of trade finance programs have been introduced during the past two years, they all depend on a well-functioning banking system that can issue letters of credit and take on some risk of default by Indonesian borrowers. The first programs to be introduced provided guarantees to international banks that were willing to confirm Indonesian letters of credit. However, the programs provided no new financing for Indonesian exporters and no incentives for Indonesian banks to open letters of credit.<sup>3</sup> Although aimed at Indonesian exporters, the programs were only used by Bulog and Pertamina.<sup>4</sup>

A credit guarantee program introduced late last year by Bank Indonesia, and now administered through Bank Ekspor and PT Askrindo, offers a broad range of finance (e.g. working capital loans) and provides banks with partial guarantees against default by borrowers. Although specifically designed to overcome the difficulties of previous programs, only one Indonesian bank had utilized the program when interviews were conducted two months ago. Private commercial banks apparently mistrust the Government guarantee (because of Bank Bali). Banks must also improve their capital adequacy ratio and since letters of credit issued under the program count as a bank liability (with a minimum 20% risk weight), they have been unwilling to participate in the program. Until international banks resume lending in Indonesia and until capital adequacy ratios improve so that domestic banks can also lend, this program may have a minimal impact on exports.

<sup>3</sup> Even though international banks previously agreed to return to pre-crisis lending levels under the Frankfurt Agreement, they are still under orders from their home offices to reduce lending exposure to Indonesia.

<sup>4</sup> A number of Indonesia's trading partners also introduced programs which in theory would have provided financing to Indonesian importers. But these programs only cover products that countries wish to export, not the raw materials that Indonesian exporters need to import (cotton being one exception).

### ***Indonesia Export Performance by Size of Company***

There is now much evidence that Indonesia's small-scale industries have been less negatively affected by the crisis than large-scale companies. One reason for this is that small companies rely less on outside financing and are unlikely to have accumulated foreign currency debt. Table 3 attempts to test this hypothesis with respect to the export sector.

It does appear that industries with smaller exporters have done better than those dominated by a few firms. Exports from sectors with small exporters increased by 3.6 percent in 1998, compared with 0.8% for sectors with large firms. Although exports from both sectors declined in 1999, the decline was much less (-2.1%) for small company sectors than for large company sectors (-13.1%).

**Table 3: Indonesia's Export Performance by Size of Company Exports**

	Export Growth For Industries with Average Exports per Company	
	<\$2.5 Million	>\$2.5 Million
1998 on 1997	3.6%	0.8%
First 6 mos. of 1999 on First 6 Mos. of 1998	-2.1%	-13.1%

Note: Table 2 includes forestry and manufacturing. Mining and agriculture are excluded.

## **APPENDICES**

### **SUPPORTING TRADE DATA AND EXPLANATORY NOTE**

### **INDONESIAN EXPORTS ON A MONTHLY BASIS**

## APPENDIX A: EXPLANATORY NOTE ON INDONESIAN TRADE DATA

### *Adjustments to Indonesian Export Data*

The analysis of Indonesian exports during the economic crisis is made difficult by the changes that were made to Indonesia's export declaration procedures in August 1997. Under the new procedures, exporters could use a simplified export declaration form (PEBT) for shipments of under Rp 300 million. The form requires that exporters specify the general nature of the item being exported, but not a detailed export classification code (HS number). Since the PEBT reporting codes contain far less information than standard 9-digit HS codes, it is difficult to determine the exact nature of the item being exported. The form has also created difficulties in interpreting Indonesian export statistics since exports are still reported under standard HS and SITC codes.

The general product descriptions for PEBT are as follows: agricultural products, forestry products, textiles and clothing, handicrafts, electronics, leather products, rubber products, toys, and other manufactured goods. In the case of textiles and garments, for example, there is only one PEBT code even though these are separate industries. Many important export items, such as plywood and furniture, do not have individual PEBT codes. Plywood falls under the PEBT code for forestry products, but furniture exports could be reported under several different codes. As a result, Indonesian exports of some products have been reported as declining, even though these exports might show an increase if PEBT exports are taken into account.

Although the PEBT form was rescinded in April 1999, export statistics during most of the economic crisis have been affected by the form. Government statistics show sharp declines in exports for many commodities. These declines are sometimes attributed to the economic crisis even though exports are actually being reported on the new PEBT forms. In the future, exports may show sudden increases since exported products that were formerly recorded under PEBT will now be recorded under their proper HS numbers.

For this report, more than 40,000 company records on PEBT shipments during the last four months of 1997 were matched with company records from previous years. PEBT shipments were then reallocated back into 2- and 3-digit SITC codes by assuming that companies exported in the same proportion as in the past. For 1998 and 1999, it was then assumed that each PEBT code maps into 2- and 3-digit SITC codes in the same average proportion as found for 1997. In 1997, for example, 50 percent of the PEBT code for textiles & clothing mapped into the SITC code (84) for clothing and accessories; 43 percent mapped into the SITC code (65) for textiles, yarn, and fabrics; and 7 percent mapped into other SITC codes. These same proportions were used to reallocate PEBT shipments in 1998 and 1999 into standard SITC codes. The final results of the reallocation process are incorporated in the export data for 1997, 1998, and 1999 presented in Appendix Tables A and B.<sup>1</sup>

### *Export Price Indicators*

Indonesian Government statistical bulletins report the volume of imports and exports, where volumes are the "kilogram" weights reported on Customs Declaration Forms. However, it makes little sense to add kilogram weights of different export items, and to compare the total kilograms exported over time. Assume exports consist of 5 tons of oranges and one ton of TV sets, for a total tonnage of 6 tons. Now assume that orange exports fall to 3 tons while exports of TV's increase to two tons. The total tonnage of exports has fallen, but TV's are different from oranges and one has no way of knowing whether a ton of each should be treated the same. Similar problems arise within identical product classifications. There are many different types and qualities of TV sets, and of oranges.

One way to account for different types of products is to weight all volumes by fixed value weights, where the weights are chosen from some base year. This results in a volume index that can be compared over time. An implicit

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<sup>1</sup> The final column of Appendix Table B contains a confidence factor for each product category. This factor indicates the percentage of PEBT exports which were exported by companies whose only export was from that category, or which exported at least 95 percent from that category. For example, the 83 percent confidence factor for non-ferrous metals (SITC 68) means that 83 percent of all PEBT exports for SITC 68 came from companies which only exported non-ferrous metals, or whose exports of non-ferrous metals were at least 95 percent of total company exports.

export price index can also be obtained by dividing the value of exports by the volume index. Alternatively, one can calculate an export price index directly by weighting export unit values. An implicit volume index is then obtained by dividing the value of exports by the price index. This is the approach used for this report. Export price indices are published for many countries in the IMF Financial Statistics, but not for Indonesia.

The price indices in this report are traditional Laspeyres indices using 1996 as the base year.<sup>2</sup> The indices are calculated from 8-digit SITC unit values (the value of exports divided by the volume of exports at the 8-digit SITC level). These unit values are weighted by the value share of each 8-digit code in the relevant 3-digit code to obtain a 3-digit SITC price index. Indices of higher level of aggregation (2-digit, 1-digit, and the price index for all exports) are obtained in a similar fashion. The price indices were calculated on a monthly, quarterly, semi-annual, and annual basis.

During the construction of the export price index, many problems were encountered. First, all export data must be transformed from HS codes into SITC codes. In 1996, there were many changes to Indonesian HS codes, but a new mapping from HS to SITC was not developed until the following year. As a result, the coding of SITC data for 1996 may not be consistent with that in later years. For this reason, a special data set was constructed for 1996. The data set takes into account the changes in Indonesian HS numbers and then uses the mapping from later years to transform the data into 8-digit SITC codes. This data set is used to construct the weights for the export price index.

A second problem is that export unit values are very unreliable measures of exports prices and can exhibit changes of hundreds or thousands of percent on a monthly, and even annual basis. This implies that either the composition of exports has changed significantly, or that the data have been incorrectly recorded by the exporter or statistical office. In order to eliminate outliers from the data, three automatic filters were used. The three filters are:

- 1) Export Share Filter: For 1996, all 8-digit SITC codes which represent less than 0.2 percent of the value of exports for each 3-digit SITC code are excluded from the index.
- 2) Volume Change Filter: Whenever the volume of exports for an 8-digit code decreases by more than 96 percent, or increases by more than 2500 percent [ $1/(1-.96) \times 100$ ] of 1996 base period exports, the unit value of exports is assumed unchanged from the previous period.
- 3) Value-Volume Filter: Whenever the value of exports equals the quantity of exports for an 8-digit SITC code, the unit value of exports is assumed unchanged from the previous period.

The decision criteria for the filters were tested by calculating the standard deviation of the percent change in export unit values for each of the years 1997, 1998, and 1999. A large standard deviation indicates that there are extremely large changes in some unit values. Often, these changes were in the order of thousands of percent. By increase the amount of filtering, such outliers can automatically be eliminated from the data.

Appendix Table 3 illustrates how the standard deviations vary with the decision criteria. When no filters are applied, the standard deviation of the percent change in 1997 export unit values is 1777. By eliminating all 8-digit SITC codes with extremely large changes in volumes (Volume Change Filter set at 96 percent), the standard deviation falls to 1242. By also eliminating all SITC codes which represent less than 0.2 percent of exports in each 3-digit SITC code (Export Share Filter at 0.2 percent), the standard deviation falls to 576. The decision criteria used for each filter was chosen so as to reduce the standard deviations in each year as much as possible, while at the same time minimizing the loss of data filtered from the price indices.

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<sup>2</sup> Because of rapid changes in the types of goods exported, it would have been preferable to use a later year to weight the index. However, 1996 is the most recent year which is unaffected by the PEBT export declaration forms. Also, many countries now use more complex methods to construct export price indices, but Indonesian data are not refined enough to support such methods.

**Appendix Table 3: Standard Deviations of Export Unit Values for Various Filters**

	Standard Deviation of the Percent Change in Export Unit Values		
	Year 1997	Year 1998	Year 1999
No Filters	1777	2465	20314
Volume Change: 96%	1242	1081	19851
Export Share: 0.1 %	838	1047	1003
Export Share: 0.2 %	576	874	829
Export Share: 0.3%	600	911	865
Export Share: 0.5%	512	875	914
Export Share: 1.0%	149	972	919

***Imported Input Content***

Data on the raw materials imported by each industry were compiled from Indonesia's Industrial Survey for 1996. First, each 5-digit KLUI code from the Survey was mapped into a 2-digit SITC code. The import content for each 2-digit SITC code is then estimated by taking the weighted average of the raw material import content of each 5-digit KLUI codes within a 2-digit SITC code. The weights were the export shares of each 5-digit KLUI code.

There are several problems with import content estimates. First, the Industrial Survey includes companies that produce primarily for the domestic market. Imports of raw materials by these companies may be very different (e.g. much lower) than that for companies which specialize in exports. Second, the Industrial Survey only includes manufactured products. In some sectors like agriculture, it is impossible to distinguish between exports of fresh products and exports of manufactured products even at the 3-digit SITC level. Thus, the imported input content for agriculture is for "processed" products and overestimates the import content of the entire sector. Finally, there appears to be a problem with the Industrial Survey data for electronic data processing equipment. Firms in this sector reported zero use of imported raw materials. This may be because the firms are assemblers that purchase domestically produced components, which themselves have a high import content. As a result, the import input content for data processing equipment (56%) was obtained from alternative data sources. Most likely, the coefficient is still too low.

***Average Exports Per Company***

Average exports-per-company were derived from BPS data on company exports in 1994.<sup>3</sup> For each 2-digit SITC code, the companies reporting at least 50 percent of their exports from that code were identified. The average export-per-company is the total exports of all such companies divided by the number of companies, where total exports do not include exports under other SITC codes. If, for example, 60 percent of a company's exports are textiles and 40 percent are garments, the company is classified as a textile exporter and its garment exports are excluded from total textile exports. Since the company is classified as a textile exporter, its garment exports are also not included in total garment exports.

As is the case with other data used in this report, the data on average exports-per-company should be interpreted with caution. First and foremost, the data measure "average exports," not the size of companies. There can be large

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<sup>3</sup> See "Export Profiles: Indonesia's Top 50 Exporting Companies in Ten Economic Sectors," by Stephen L. Magiera, TIP Project, May 1997.

companies which export only a small proportion of their output and which are included in export sectors with many small-scale exporters. Second many companies, such as trading companies, export a wide range of products and will be excluded from the database if there is no single SITC code which accounts for 50 percent of these companies' exports.

## APPENDIX B: THE MONTHLY EXPORT SITUATION FOR SELECTED INDUSTRIES

Charts 3a and 3b illustrates the monthly export situation for selected industries. The industries are by no means representative of the Indonesian export sector, but do illustrate some of the differences in performance across sectors.

**Cautionary Note:** Each chart contains official export data as declared on Indonesian export declaration forms (PEB). This data is then adjusted to take into account exports reported on PEBT declaration forms (see the Appendix explanation on data for a discussion of PEBT exports). The resulting data on total exports for each industry are unofficial and are not contained in any Government publication. Several of the charts also contain imports of key raw materials. These data are no longer available to us on a regular basis but are included in the charts since they illustrate the decline in raw material imports that has occurred during the crisis.

Several general statements can be made concerning the charts.

- Care must be used in interpreting press reports on Indonesian exports. These reports sometimes refer only to PEB exports and indicate a sharp decline in 1997 and 1998. If exports under PEBT are also included, exports of a sector may have increased. See textiles and garments for an example.
- The decline in raw material imports is evident for all industries for which data were available.<sup>1</sup> In some cases, this trend appears to have set in even before the crisis. Examples are fiber for "textile" exports and primary plastics for "plastic product" exports. It may be the case that Indonesia was successfully developing upstream industries for some products and that exporters had turned to domestic producers for some inputs.
- Textiles exports were expanding rapidly through mid-1998 when they then went into a slump. Textile exporters had warned of pending raw material shortages due to lack of trade finance, and it may be the case that these shortages began to bite during the summer of 1998. Since then, the rupiah has appreciated and there are now reports that domestic sales are more attractive than export sales. This may slow the recovery of exports in the future.
- Some sectors appear to have weakened even before the crisis. The most dramatic example is toy exports which peaked at about \$60 million dollars in November 1995 and are now running at about \$10 million monthly. Footwear exports also peaked many months before the crisis and were running below the previous year for most of 1997. There were reports in 1997 that Indonesia was losing its competitiveness in footwear and that buyers were shifting orders to other Asian countries.
- Garment exports appear to have received a big boost early in the crisis and have since fallen off to pre-crisis levels. It may be the case that producers took early advantage of the depreciated rupiah to sell off inventories of finished goods.
- Anecdotal evidence from field interviews indicates that export-oriented furniture companies have done very well during the crisis. Because of the specialized nature of the industry and different quality standards, it is difficult for producers to shift sales from the domestic market to the export market. Export-oriented companies have apparently overcome these difficulties by sub-contracting with domestic-oriented firms and by hiring skill labor from these firms.
- Leather and travel good exports have done extremely well and show no sign of being affected by the crisis. Although exports are extremely small (\$20 million monthly), this industry does consist of many smaller exporters. Thus, the expansion of this industry is consistent with the notion that small-scale

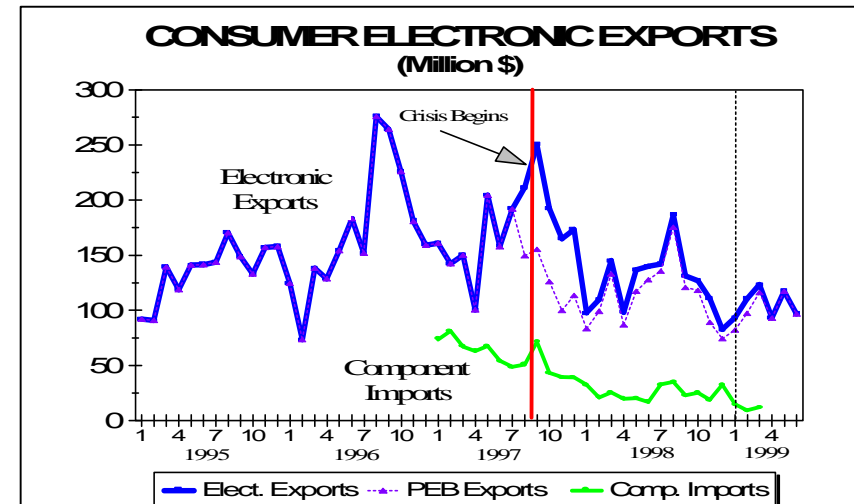
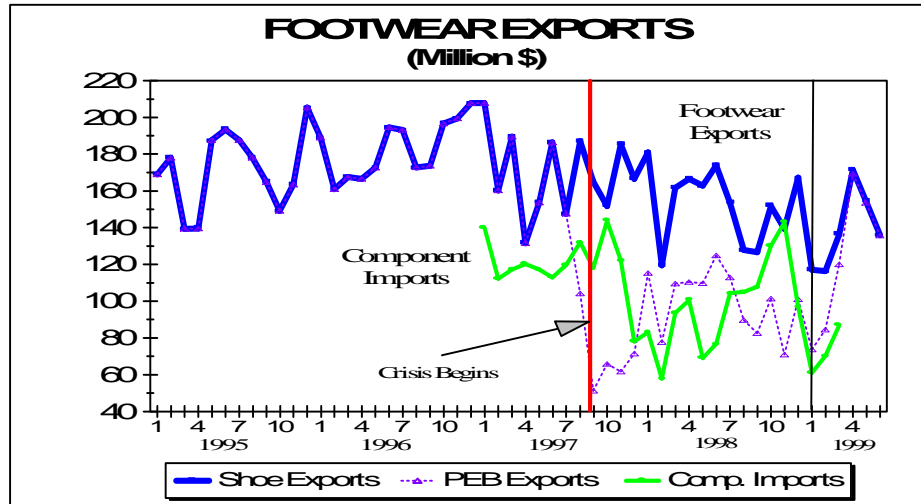
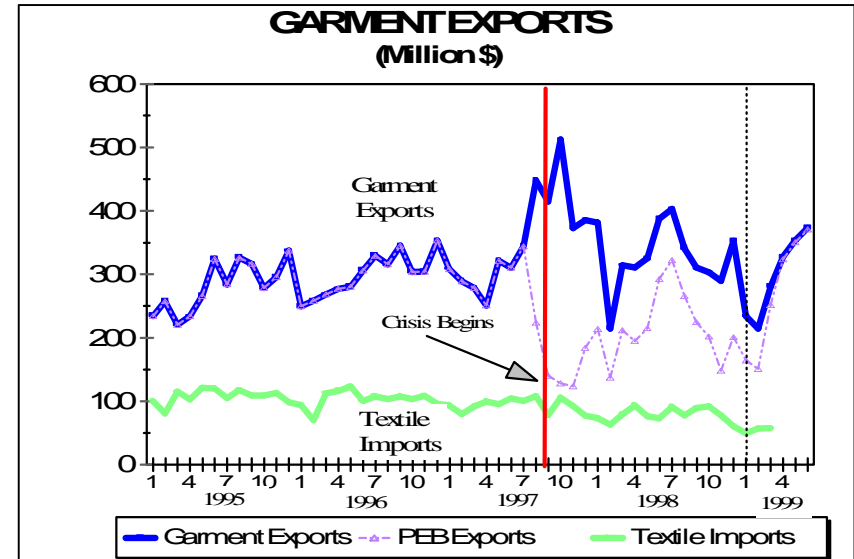
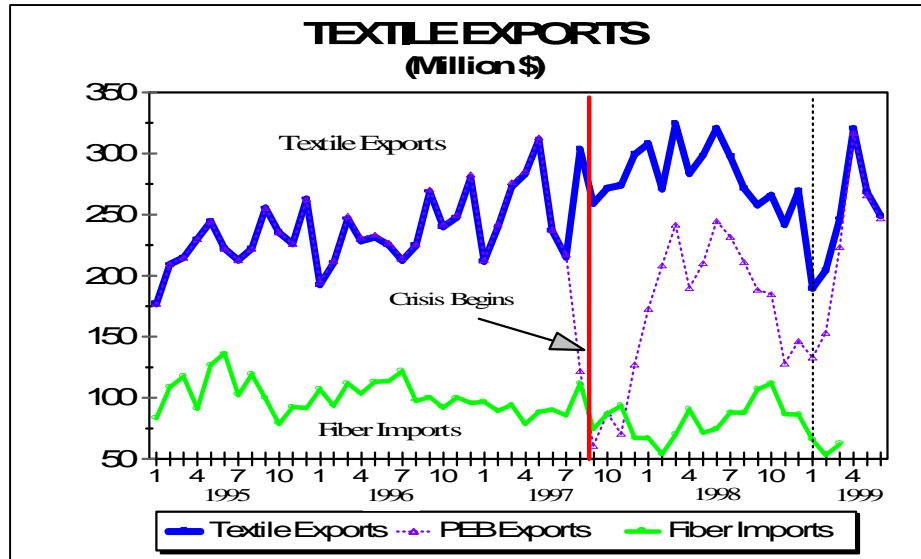
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<sup>1</sup> Raw material imports refer to the totals imported by all industries in Indonesia and thus overestimate the imports of particular industries in the charts. For example, primary plastics are used in industries other than plastic products.

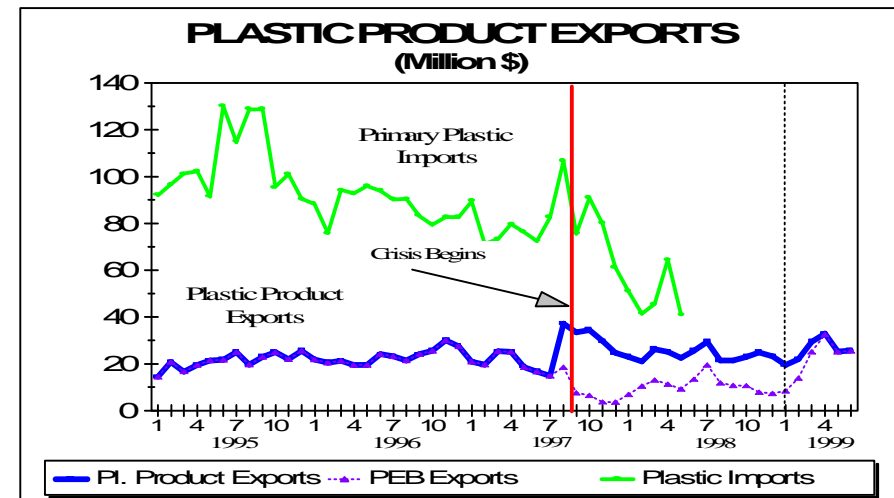
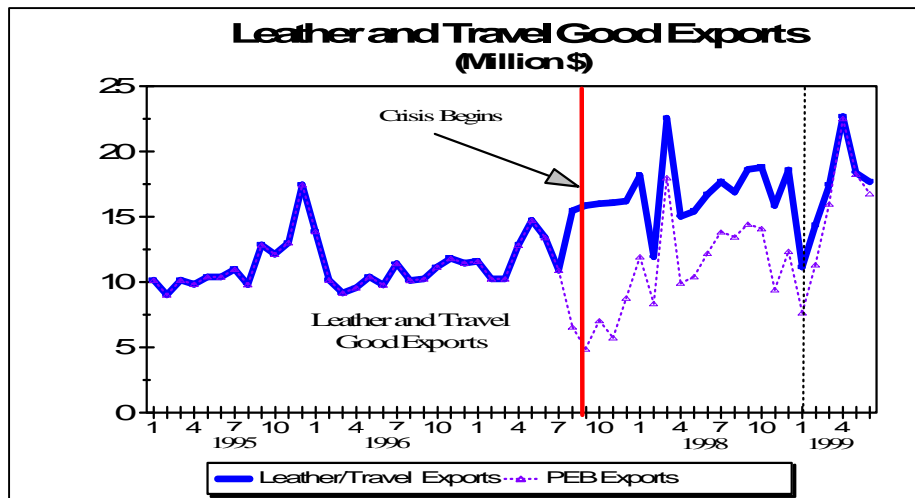
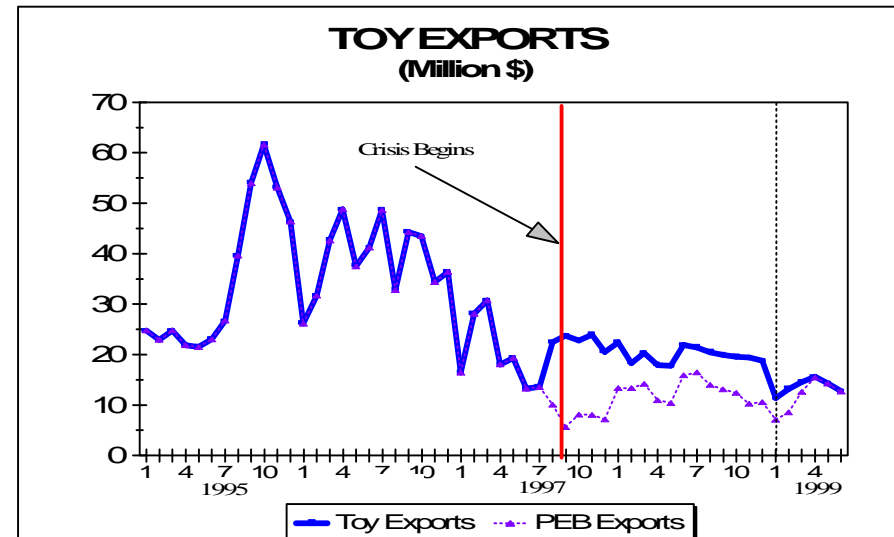
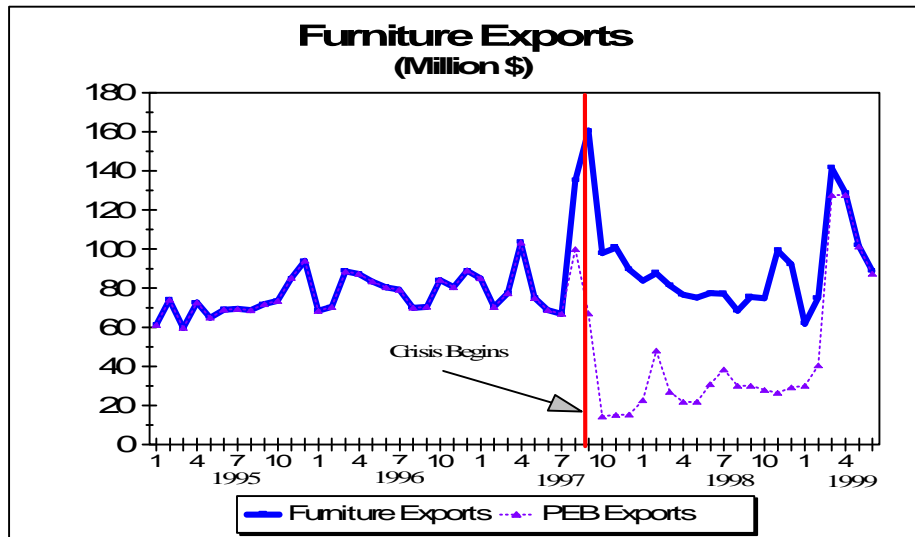
exporters have been less affected by the crisis.

- One sector which appears to have serious problems is consumer electronics. As in the case of shoes and toys, a declining trend appears to have set in before the crisis and exports are now at levels of 1995. Consumer electronics depends heavily on imported components, but problems with trade finance alone cannot explain the decline in exports since many exporting companies are joint ventures with multinationals. Given rapid changes in global sourcing patterns toward Mexico and Eastern Europe, this industry may have difficulty recovering in the near future.

# CHART 3a: MONTHLY EXPORTS FOR SELECTED ECONOMIC SECTORS



# CHART 3b: MONTHLY EXPORTS FOR SELECTED ECONOMIC SECTORS



**APPENDIX TABLE A: INDONESIAN EXPORTS AND SECTOR CHARACTERISTICS**

Product Description (SITC Code)	Total Exports 1997 (Mill. \$)	Export Growth 1998 on 1997	Change In Prices	Export Growth January-June 1999 on 1998	Change In Prices	Imported Input Content	Average Export Per Company (Thous. \$)
<b>TOTAL NON OIL/GAS</b>	<b>41634</b>	<b>-2%</b>	<b>-14%</b>	<b>-12%</b>	<b>-13%</b>	<b>27%</b>	<b>2.6</b>
<b>Mining/Minerals</b>	<b>3910</b>	<b>-11%</b>	<b>-20%</b>	<b>1%</b>	<b>-12%</b>	<b>34%</b>	<b>13.2</b>
Metal Ores/by-Products (28)	1741	-15%	-26%	13%	-7%	0%	25.9
Coal (32)	1492	-9%	-20%	3%	-20%	49%	31.3
Non-Ferrous Metal (68)	677	-3%	-7%	-24%	-7%	86%	3.7
<b>Agriculture</b>	<b>8133</b>	<b>-10%</b>	<b>-12%</b>	<b>-7%</b>	<b>-14%</b>	<b>6%</b>	<b>3.2</b>
Rubber (23)	1525	-25%	-36%	-19%	-25%	1%	8.0
Fish/Shrimp (03)	1774	2%	-20%	-24%	-11%	5%	4.0
Coffee,Tea,Cocoa,Spices (07)	1403	19%	2%	0%	-24%	9%	3.4
Vegetable Oil (42,43)	2295	-33%	-1%	16%	-5%	1%	10.9
Fruits/Vegetables (05)	305	-8%	-5%	25%	2%	9%	1.1
Beverages/Tobacco (11,12)	281	5%	10%	-22%	-15%	31%	2.4
Animal Feed (08)	155	-18%	-26%	-31%	-11%	46%	2.1
Other (00-02,04,06,09,21,22,29,41)	395	12%	-7%	6%	-17%	4%	0.5
<b>Forestry</b>	<b>6802</b>	<b>-10%</b>	<b>-30%</b>	<b>-3%</b>	<b>1%</b>	<b>11%</b>	<b>3.4</b>
Plywood (634)	3921	-35%	-41%	5%	16%	2%	8.0
Other Wood Manufactures (rest 63)	910	-6%	-15%	-9%	-29%	5%	1.4
Pulp (25)	514	42%	0%	-54%	-15%	30%	5.5
Paper (64)	1135	53%	-21%	9%	-13%	41%	2.5
Wood/Cork (24)	322	-16%	-13%	15%	-29%	0%	0.8
<b>Other Manufactures</b>	<b>22025</b>	<b>6%</b>	<b>-9%</b>	<b>-17%</b>	<b>-17%</b>	<b>40%</b>	<b>2.0</b>
Textiles (65)	3194	7%	-23%	-18%	-20%	25%	3.0
Textiles Fiber (26)	169	9%	-5%	-53%	-14%	74%	0.8
Garments (84)	4072	-3%	-4%	-8%	-19%	32%	2.5
Footwear (85)	2033	-10%	-8%	-14%	-17%	37%	3.8
Furniture (82)	1131	-14%	-10%	24%	-23%	4%	0.9
Organic Chemicals (51)	712	19%	-13%	-13%	-3%	15%	3.5
Fertilizer (27,56)	527	-45%	-16%	-21%	-28%	25%	2.8
Essential Oils (55)	251	21%	-13%	-5%	-29%	36%	0.9
Other Chemicals (52,53,54,59)	387	18%	-10%	-11%	-17%	71%	0.7
Plastic (Primary/Non-Primary) (57,58)	534	37%	-22%	-29%	-11%	42%	0.8
Cement,Glass,Ceramic (66)	510	18%	-23%	17%	-24%	41%	0.9
Iron/Steel (67)	342	85%	-19%	-39%	-9%	58%	3.0
Metal Manufactures (69)	635	-9%	-32%	-7%	-3%	48%	0.9
Consumer Electronics (76)	1857	-19%	1%	-13%	-19%	79%	10.3
Data Processing/Office Machinery (75)	950	-12%	-5%	51%	4%	56%	5.6
Electrical Machinery (77)	1220	1%	9%	14%	-2%	70%	2.5
General Machinery (74)	222	19%	-9%	0%	-16%	51%	0.8
Other Machinery (71,72,73)	320	89%	20%	-27%	-6%	60%	0.3
Road Vehicals/Other Transport (78,79)	475	64%	0%	-2%	-4%	47%	3.7
Rubber Articles (62)	351	-3%	-11%	-8%	-16%	31%	1.8
Leather/Travel Goods (61,83)	163	40%	-2%	-18%	-35%	40%	0.3
Plastic Articles (893)	178	-18%	9%	23%	-10%	43%	0.4
Toys/Games (894)	253	-6%	-5%	-31%	-3%	41%	0.9
Jewelry (897)	707	136%	-4%	-96%	-83%	0%	6.6
Other Manuf. Goods of 89	375	8%	-1%	7%	-36%	33%	1.0
Photo Equip/Other Manuf (81,87,88)	457	-32%	0%	1%	3%	75%	1.1
<b>Other</b>							
Gold/Special Transactions (93,97)	764	-36%	NA	-49%	NA	NA	NA

**Appendix Table B: Indonesian Non Oil/Gas Exports (1996-1998)**  
(Million Dollars)

Product Description (SITC Code)	1996 Exports	1997 Exports		1997 Growth		1998 Exports		1998 Growth		*Conf. Factor
		PEBT nonalloc.	PEBT allocated	PEBT nonalloc.	PEBT allocated	PEBT nonalloc.	PEBT allocated	PEBT nonalloc.	PEBT allocated	
<b>Non Oil/Gas Exports</b>	<b>38,006</b>	<b>41,781</b>	<b>41,781</b>	<b>9.9%</b>	<b>9.9%</b>	<b>40,768</b>	<b>40,768</b>	<b>-2.4%</b>	<b>-2.4%</b>	<b>100%</b>
<b>Mining/Minerals</b>	<b>3,833</b>	<b>3,882</b>	<b>3,910</b>	<b>1.3%</b>	<b>2.0%</b>	<b>3,449</b>	<b>3,485</b>	<b>-11.2%</b>	<b>-10.9%</b>	<b>97%</b>
Metals Ores/by-Products (28)	2,044	1,738	1,741	-15.0%	-14.8%	1,475	1,480	-15.1%	-15.0%	96%
Coal (32)	1,124	1,491	1,492	32.7%	32.8%	1,350	1,350	-9.5%	-9.5%	100%
Non-Ferrous Metals (68)	665	653	677	-1.8%	1.8%	625	655	-4.4%	-3.2%	83%
<b>Agriculture</b>	<b>7,582</b>	<b>7,643</b>	<b>8,133</b>	<b>0.8%</b>	<b>6.4%</b>	<b>6,673</b>	<b>7,307</b>	<b>-12.7%</b>	<b>-10.1%</b>	<b>95%</b>
Rubber (23)	1,923	1,501	1,525	-21.9%	-20.7%	1,110	1,139	-26.1%	-25.3%	94%
Fish/Shrimp (03)	1,677	1,619	1,774	-3.4%	5.8%	1,614	1,814	-0.3%	2.3%	85%
Coffee, Tea, Cocoa, Spices (07)	1,276	1,285	1,403	0.7%	10.0%	1,517	1,672	18.0%	19.2%	80%
Vegetable Oils (40,42,43)	1,577	2,281	2,295	44.7%	45.6%	1,517	1,534	-33.5%	-33.1%	0%
Fruits/Vegetables (05)	369	245	305	-33.6%	-17.4%	205	281	-16.5%	-7.8%	80%
Beverages/Tobacco (11,12)	229	252	281	9.9%	22.4%	258	294	2.5%	4.8%	94%
Animal Feed (08)	207	141	155	-31.7%	-25.1%	112	128	-20.8%	-17.7%	10%
Other (00-04,06,09,21,22,41,29)	324	317	395	-2.2%	21.8%	340	444	7.2%	12.3%	43%
<b>Forestry</b>	<b>6,472</b>	<b>6,150</b>	<b>6,802</b>	<b>-5.0%</b>	<b>5.1%</b>	<b>5,038</b>	<b>6,139</b>	<b>-18.1%</b>	<b>-9.8%</b>	<b>93%</b>
Plywood (634)	3,920	3,743	3,921	-4.5%	0.0%	2,233	2,545	-40.3%	-35.1%	76%
Other Wood Man. (rest of 63)	852	712	910	-16.4%	6.9%	503	856	-29.3%	-6.0%	30%
Pulp (25)	432	490	514	13.4%	19.1%	690	732	40.9%	42.3%	24%
Paper (64)	943	926	1,135	-1.8%	20.4%	1,415	1,736	52.8%	52.9%	78%
Other wood (24)	326	279	322	-14.4%	-1.2%	197	270	-29.5%	-16.1%	13%
<b>Other Manufactures</b>	<b>20,119</b>	<b>18,140</b>	<b>22,789</b>	<b>-9.8%</b>	<b>13.3%</b>	<b>18,060</b>	<b>23,809</b>	<b>-0.4%</b>	<b>4.5%</b>	<b>95%</b>
Textiles (65)	2,834	2,255	3,194	-20.4%	12.7%	2,359	3,411	4.6%	6.8%	74%
Textile Fiber (26)	147	136	169	-7.5%	14.7%	147	184	8.0%	9.3%	44%
Garments (84)	3,591	2,904	4,072	-19.2%	13.4%	2,630	3,935	-9.4%	-3.4%	80%
Footwear (85)	2,195	1,531	2,033	-30.3%	-7.4%	1,206	1,832	-21.2%	-9.9%	95%
Furniture (82)	952	759	1,131	-20.3%	18.8%	355	970	-53.2%	-14.3%	64%
Organic Chemicals (51)	504	645	712	27.9%	41.2%	762	850	18.1%	19.3%	36%
Fertilizer (27, 56)	405	452	527	11.6%	30.2%	203	289	-55.1%	-45.1%	83%
Essential Oils (55)	199	189	251	-5.0%	26.5%	222	304	17.7%	21.0%	58%
Other Chemicals (52, 53, 54, 59)	351	320	387	-8.9%	10.4%	364	455	13.9%	17.6%	57%
Plastics (primary/other) (57,58)	401	411	534	2.5%	33.0%	576	730	40.0%	36.8%	41%
Cement, Glass, Ceramics (66)	408	304	510	-25.5%	25.0%	332	602	9.2%	18.0%	95%
Iron/Steel (67)	335	328	342	-2.2%	2.0%	614	632	87.4%	84.9%	71%
Metal Manufactures (69)	432	476	635	10.1%	46.9%	364	575	-23.4%	-9.4%	43%
Consumer Electronics (76)	2,059	1,753	1,857	-14.9%	-9.8%	1,361	1,508	-22.4%	-18.8%	63%
Data/Office Machinery (75)	800	920	950	15.0%	18.7%	800	840	-13.0%	-11.5%	14%
Electrical Machinery (77)	1,067	1,073	1,220	0.6%	14.4%	1,029	1,229	-4.1%	0.7%	63%
General Machinery (74)	205	191	222	-7.0%	8.5%	223	265	17.2%	19.2%	48%
Other Machinery (71,72, 73)	280	268	320	-4.2%	14.6%	537	607	100.5%	89.4%	23%
Road vehicals transport (78,79)	572	420	475	-26.5%	-16.9%	707	778	68.2%	63.7%	27%
Rubber Articles (62)	299	269	351	-10.0%	17.3%	251	339	-6.8%	-3.4%	92%
Leather/Travel Goods (61,83)	129	117	163	-9.5%	26.7%	171	229	46.7%	40.2%	67%
Plastic Articles (893)	190	104	178	-45.4%	-6.2%	50	146	-51.8%	-18.3%	57%
Toys/Games (894)	468	179	253	-61.8%	-46.0%	155	238	-13.3%	-6.0%	47%
Jewelry (897)	527	701	707	33.2%	34.2%	1,660	1670	136.7%	136.3%	92%
Other Manufactured Goods of 89	365	263	375	-27.9%	2.7%	244	404	-7.1%	7.7%	47%
Photo.equip/other Manuf. (81,87,88)	316	421	457	33.4%	44.8%	263	312	-37.6%	-31.7%	23%
Gold/Special Transactions (93,97)	88	754	764	756.7%	768.4%	475	475	-37.0%	-37.9%	95%
<b>PEBT</b>	<b>--</b>	<b>5,966</b>	<b>147</b>	<b>--</b>	<b>--</b>	<b>7,548</b>	<b>28</b>	<b>--</b>	<b>--</b>	<b>--</b>

\*The confidence factor is the percentage of PEBT exports by companies whose exports are at least 95% from the listed product category. For example, the confidence factor for plywood is 76 percent. This implies that 76% of PEBT plywood exports were from companies that only exported plywood or whose exports were at least 95% plywood.